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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Martin T. Pearson
Application No. : 10/017,462
Filed : December 14, 2001
For : METHOD AND APPARATUS FOR MULTIPLE MODE
CONTROL OF VOLTAGE FROM A FUEL CELL SYSTEM
Examiner : Angela J. Martin
Art Unit : 1745
Docket No. : 130109.442
Date : September 14, 2004

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE TO RESTRICTION REQUIREMENT

Commissioner for Patents:

In response to the Restriction Requirement dated August 12, 2004, Applicant hereby elects Group II, including claims 16-34, for examination at this time, and respectfully traverses the Restriction Requirement.

The Examiner has restricted the application into:

Group I including claims 1-15 and 46-51 directed to a fuel cell system;

Group II including claims 16-34 directed to a control circuit; and

Group III including claims 35-45 directed to a method of operating a fuel cell system.

Restriction Can Be Proper In Limited Circumstances.

An application may properly be restricted to one of two or more claimed inventions if they are able to support separate patents and they are either *independent* or *distinct*. If a search and examination of an entire application can be made *without serious burden*, the Examiner *must* examine it on the merits, even though it includes claims to independent or distinct inventions. MPEP 803. In referring to practice under 35 U.S.C. 121, the MPEP notes "it

becomes very important that the practice under this section be carefully administered,” and goes on to state “IT STILL REMAINS IMPORTANT FROM THE STANDPOINT OF THE PUBLIC INTEREST THAT NO REQUIREMENTS BE MADE WHICH MIGHT RESULT IN THE ISSUANCE OF TWO PATENTS FOR THE SAME INVENTION.” MPEP 803.01 (Emphasis in original). The concern is that the public should be able to rely on the assumption that upon expiration, the public will be free to use not only the invention claimed in the patent, but also modifications and variants thereof. MPEP 804.

The term “distinct” means that two or more subjects as disclosed are related, but are capable of separate manufacture, use, sale as claimed, AND ARE PATENTABLE (novel and unobvious) OVER EACH OTHER (though they may each be unpatentable because of the prior art). MPEP 802.01 (Emphasis in original).

With respect to Groups I and II the Examiner contends that such claims “are related as mutually exclusive species in an intermediate-final product relationship” where “the intermediate product is deemed to be useful as a control circuit which can control any one of the three errors described, and not necessarily all three errors together.” However, the same can be said about the system claims which incorporate the control circuit.

For example, in pertinent part claim 1 recites, *inter alia*, “a series pass element electrically coupled between at least a portion of the fuel cell stack and a portion of the battery; and a regulating circuit for regulating a current through the series pass element in response to a greater of a battery charging current error, a battery voltage error and a stack current error. Likewise, in the pertinent part claim 16 recites, *inter alia*, “a series pass element electrically coupleable between at least a portion of the fuel cell stack and a portion of the battery; and a regulating circuit for regulating current through the series pass element in response to a greater of a battery charging current error, a battery voltage error and a stack current error.” Given the above quoted language, it is unclear how the Examiner can contend that the proffered characterization (*i.e.*, that the control circuit claims can control any one of three errors, and not necessarily all three errors together) actually distinguishes between the claims of the two groups.

The other independent claims of Group I are similar in pertinent parts to claim 1. For example, claim 9 recites, *inter alia*, “a series pass element” and “a regulating circuit for

regulating current through the series pass element in proportion to at least a greater of a difference between a battery charging current and a battery charging current limit, a difference between a battery voltage and a battery voltage limit, and a difference between a stack current and a stack current limit.” Also for example, claim 46 recites, *inter alia*, “a first series pass element electrically coupled in series on the voltage buss between at least a portion of the first fuel cell stack and a portion of the first battery;” and “a first regulating circuit for regulating current through the first series pass element in response to a greater of a battery charging current error, a battery voltage error and a stack current error.”

With respect to Groups I and III, the Examiner contends that such claims are related as product and process of use” and that “the method of operating does not require monitoring each of the three components (battery current, battery voltage, stack current), since monitoring the voltage would automatically entail monitoring the current.” However, the same can be said about the system claims which incorporate a control circuit that performs the control operation.

For example, in the pertinent part claim 1 recites, *inter alia*, “a series pass element electrically coupled between at least a portion of the fuel cell stack and a portion of the battery; and a regulating circuit for regulating a current through the series pass element in response to a greater of a battery charging current error, a battery voltage error and a stack current error. Likewise, in the pertinent part claim 35 recites, *inter alia*, “regulating current through a series pass element in response to a greater of a battery charging current error, a battery voltage error and a stack current error.” Given the above quoted language, it is again unclear how the Examiner can contend that the proffered characterization (*i.e.*, the method of operating does not require monitoring each of the three components (battery current, battery voltage, stack current), since monitoring the voltage would automatically entail monitoring the current) actually distinguishes between the claims of the two groups.

As discussed above, the other independent claims of Group I are similar in pertinent parts to claim 1.

The Examiner Has Not Met Initial Burden.

The burden is on the Examiner to provide *reasonable* examples that recite material *differences*. MPEP 806.05(e).

As discussed above, the example presented by the Examiner with respect to Groups I and II does not appear to recite any material differences between claims of Group I and the claims of Group II. Thus, the Restriction between the claims of Group I and Group II is improper and should be withdrawn.

As discussed above, the example presented by the Examiner with respect to Groups I and III does not appear to recite any material differences between the claims of Group I and the claims of Group III. Thus, the Restriction between the claims of Group I and Group III is improper and should be withdrawn.

The Claims Are So Related As To Present No Serious Burden To The Examiner.

Applicant's Attorney is unable to discern how searching the entire application would present a *serious burden* to the Examiner.

By entering the Restriction Requirement, the Examiner is contending that while searching the fuel cell system claims (Group I) in class 429, subclass 21, she would not also search art class 320, subclass 101, which purportedly covers control circuits for fuel cell systems, or class 307, subclass 66, which purportedly covers methods of operating fuel cell systems. Likewise, in examining the claims of Group II, the Examiner would not search class 429, subclass 21, purportedly covering fuel cell systems, or class 307, subclass 66, purportedly covering methods of operating fuel cell systems. Further, in examining the method claims (Group III) the Examiner would not search class 429, subclass 21, purportedly covering fuel cell systems, or class 320, subclass 101, which purportedly covers control circuits for fuel cell systems.

This contention leaves the Applicant wondering whether acquiescing in the Restriction Requirement would result in an inadequate search of the art. From past experience, it is likely that in addition to art classes encompassing fuel cell systems, the Examiner will look to art classes covering control circuits for fuel cell systems and well as methods of controlling fuel

cell systems, and *will* rely on references from such classes to reject the claims directed to the fuel cell system. Likewise, when examining claims directed to control circuits for fuel cell systems, the Examiner *will* likely look to art classes encompassing fuel cell systems and methods of operating fuel cell systems, and *will* rely on such art in rejecting claims to the control circuit. Further, when examining claims directed to methods of controlling fuel cell systems, the Examiner *will* likely look to art classes encompassing fuel cell systems and control circuits for fuel cell systems, and *will* rely on such art in rejecting claims to the methods.

For all of the above reasons, reconsideration and withdrawal of the Restriction Requirement is respectfully requested. Consequently, examination of all pending claims is respectfully urged.

Respectfully submitted,

SEED Intellectual Property Law Group PLLC



Frank Abramonte
Registration No. 38,066

Enclosure:
Postcard

701 Fifth Avenue, Suite 6300
Seattle, Washington 98104-7092
Phone: (206) 622-4900
Fax: (206) 682-6031
(FXA:lrj) 515106_1